

Original Article

Expert analysis of the competitive level of young russian judo athletes who train for active attack fighting

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Abstract

Purpose and materials: This article presents an analysis of the competitive level training of young Russian judo contestants (18 to 20 years old) who represent the Krasnoyarsk territory and the Siberian Federal District. The invited experts (i.e., judges and coaches) analysed competition battles of a number of athletes. The experts focused on the number of faults (shido), the number of real attempts at applying techniques either from a standing position (Nage-waza) or on the ground (Ne-waza), the number of successfully executed techniques by the judo athletes, and the combat dynamics. **Results:** The expert analysis showed that a number of criteria (e.g., active combat in the standing position during the entire bout, active combat on the mat, and tactics for conducting a competition battle) were not met by the athletes, which prevented them from obtaining better competitive results. Additionally, the experts provided positive feedback on the general fighting dynamics of the contestants and the quantity of technical moves they performed. **Conclusions:** Overall, according to the specialists who participated in the analysis, the judo contestants in the control group did not fall short in technique mastery compared with their foreign counterparts. However, it is necessary to make some changes to the tactical preparation process of athletes for competitions.

Key words: judo; competitive wrestling; competition rules; fighting technique; tactical mastery; Russian athletes; youth; results; shido

Introduction

Nowadays judo is one of the most popular combat sports among the population of the Russian Federation [Bliznevsky, Kudryavtsev, Iermakov, & Jagiello, 2016; Osipov, 2016; Osipov, Saparov, & Shubin, 2016; Pankov, V.A., 2003]. To our great disappointment though, specialists have been reporting a decline in the performance of the Russian judo contestants taking part in major European and World Championships or Class A Tournaments. As Tel'uk S.I. noted, there is a clear downward trend in the number of medals won by the Russian athletes in international competitions in comparison to the results of 3-4 years ago (Tel'uk, S.I., 2014). According to various Russian specialists, this situation was caused by both rather dramatic revisions in judo competition rules and failure of the Russian athletes to match their foreign counterparts in the tactical mastery to conduct a bout. Osipov's study showed that the recent changes in the competition rules hinder the judo contestants from Russia and CIS from relying fully on their strong points in bouts (advantage in physical strength, throws using leg grabs and belt grips, etc.) (Osipov, 2014; Osipov, Pazenko, Shubin, Vapaeva, & Fedorova, 2014). The author also notes that quite often Russian judo contestants get defeated to a greater extent because of the shido given by referees rather than as a result of their rivals' successful technical moves. One bright example could be the bout of Alexander Mikhaylin against the German judoka Andreas Toelzer during the 2013 World Judo Championship in Brazil. The Russian athlete lost the bronze medal bout because of the great number of shido, even though earlier he had regularly beaten the German judoka. Alexander Mikhaylin himself was rather sceptical about the revised rules and believes that it was the changing of the competition rules that had a major impact on his defeat (Mikhaylin, 2013). Yerzhan Bayzhumanov, the national judo team coach of Kazakhstan, in his comment about the revised rules, stated that they were artificially introduced only to put the Asian and European judo schools in a more favourable position at the same time disadvantaging athletes from the former USSR. Poor performance of the Kazakh judo athletes, in his opinion, has been largely to do with the so-called leg-ban, i.e. bear hug grips or leg grabs, leg attacks or any kinds of leg takedowns (Kazakhstan judo wrestlers criticized the new rules). At the same time, it is worth noting that the rule changes of this sort were

widely welcomed by many overseas specialists, primarily by the Japanese. For example, M. Tamura goes with the ban on the grips involving the pants or legs because he believes these grips are at odds with the principles of classical judo (Tamura, et al, 2012). In any case, the changes were introduced into the competition rules and now force our judo athletes into looking for new tactical patterns to conduct competition bouts. It is also worth pointing out that overseas authors have been long calling for the search of new tactical approaches to fighting (Adam, Klimovicz, & Pujso, 2016; Daniel, L., & Daniel, R., 2013; Dopico, Iglesias-Soler, & Carballeira, 2014; Miarka, et al., 2016; Mihaylescu, Rata, & Sava, 2011). L. Bocioaca argues that in today's competitive judo level result determined by the quality of technical and tactical actions of an athlete L. Bocioaca claims that contemporary judo has it that the level of competitive results is defined by the quality of the athlete's technical and tactical actions (Bocioaca, 2014). According to P.V. Trutnev, contemporary judo is becoming a more and more aggressive and up-tempo (highly dynamic) combat sport, which, in turn, requires that the athletes improve the quality of their physical, technical and tactical preparation (Trutnev, 2006). However, the success of any top judo athlete's competitive activity depends largely on their individuality that shows in their style of fighting (signature moves and a wide range of tactical and technical actions), claims V.L. Pashuta (Pashuta, & Vavilkin, 2013).

Unfortunately, the quality of the technical and tactical preparation of most Russian athletes for competitive fighting, as many specialists claim, is not high enough to win them any medals (Osipov, Saporov, & Shubin, 2016; Osipov, 2015). V.A. Pankov states that competitive bouts keep demonstrating that a considerable number of Russian athletes are lagging behind in terms of both fighting techniques and structure of technique interaction used in head-to-head bouts against representatives of the Asian and European judo schools. In his opinion, it is the direct result of the athletes' inadequate technical and tactical preparation for international competitions (Pankov, 2003). The superiority of overseas judo athletes in competitive fighting tactics was also mentioned by V.A. Bobrovskiy [5]. Moreover, the study of earlier scientific works showed that specialists had spoken about the lack of technical and tactical preparation of most Soviet judo athletes in USSR as early as back in the 1980s (Dakhnovsky, & Eganov, 1986). The reasons for this sticking around in the slow lane, as A.V. Eganov points out, lie in the scarcity of time that coaches spare exclusively to improve their athletes' tactical and technical skills, which is true for all age groups (from young to veteran athletes) (Eganov, 1999). V.A. Bobrovskiy sees a direct correlation between athletes' level of tactical skills and their experience in competition activity (Bobrovskiy, & Krest'yaninov, 2011). It follows that the Russian judo contestants improve their tactical skills in competitive fighting through their competition activity rather than training activity, which is not quite right. The training process, as viewed by coaches and athletes, is for the most part dedicated to working out space-time and power characteristics of efficient fighting techniques, which, as V.M. Adashevskiy believes, means that other actions, including those of tactics, are underestimated even though they also define the character of the sports battle (Adashevskiy, Dulewski, & Iermakov, 2011). According to some overseas experts, G. Lech in particular, excessive muscle power hampers the development of technical and tactical mastery in judo athletes (Lech, Chwala, Ambrozy, & Sterkowicz, 2015). L. Blais claims that power building in athletes should go hand in hand with their technique mastery (Blais, & Trilles, 2006). In the meantime, many coaches organise the training process in the way as to facilitate quicker development of power and speed in their athletes (Manolachi, 2015). However, according to Yu. M. Skhalyakho, in their competition activity many judo athletes perform throws somewhat directly. Most of the athletes, while performing a throw, rely on their strong points in speed or physical power, however if their rival does not allow them to perform a throw or shows active resistance, the success of this technical move will be highly questionable. To succeed, the athletes lack specific technical and tactical skills that would enable them to throw their rivals off their steady balance by false attacks or strikes (Shalyakho, 2007). All points stated above prove that it is necessary to draw more attention to development of competitive skills in Russian judo athletes in terms of improving their technical and tactical mastery in order to boost their competitive advantage in competition activity.

Materials & Methods

The study was aimed at determining the level of competitive skills (technical and tactical mastery) of young (18 to 20) judo athletes representing the Krasnoyarsk territory and the Siberian Federal District to conduct active competitive fighting. The age of the control group was chosen based on considerations given by G.P. Parkhomovich. The expert claims that the level of mastery shown by international class athletes is influenced by many factors, but the biggest impact lies in their technical and tactical skills which they work on fundamentally in their youth (Parkhomovich, 1993). Therefore, to achieve high professional results athletes of 18 and older are supposed to have already mastered the necessary fundamental technical and tactical skills. The study focuses on 24 athletes who are qualified as masters of sports in Russia and are part of the national judo team from the Siberian Federal District (SFD). It should be noted that 14 of them were part of the extended SFD team at the Russian Judo Championship held in Krasnoyarsk in 2015 when the SFD team took first place in the team ranking list. Therefore, we are talking about the athletes who are going to form part of the Russian national reserve within 2 nearest Olympic Cycles.

Surveys of leading judo coaches carried out by L. Santos show that, according to world-class experts, anyone with the intention of winning a medal at a European or World Championship, or the Olympic Games, must be capable of conducting 6 different fighting techniques from a standing position and 2 in ground fighting. The main winning factors for athletes were defined as: dynamism, counterattacks, combination techniques, and adaptability to the rival's moves (Iermakov, et al., 2016; Santos, Fernandez-Rio, Almansba, Stercovicz, & Callan, 2015; Zubitashvili, & Mayashvili, 2012).

The technical and tactical mastery of the athletes in the control group was estimated through analysis of their bouts at nation-level judo competitions: Krasnoyarsk Territory Championships; Siberian Federal District Championships; Russian Federation Championships; All-Russia Tournaments. In total the study looked into 120 competition bouts involving the athletes. 12 experts (Honoured coaches of Russia, national and international level judges with international refereeing experience) were asked to watch and evaluate the battles. The invited specialists carried out a secondary analysis of the bouts using video footage. This method makes it possible to clearly define the quality of the technical and tactical mastery of the athletes, as A. Kruszewsky claims (Kruszewsky, Jagiello, & Adamiec, 2008). While studying the video footage of the bouts the experts focused on the following: quantity and quality of athlete's technical moves; number of shido; dynamics of fighting; total number of attacks and counterattacks; level of athlete's tactical thinking which shows in their ability to create conditions for conducting a successful technical move or pushing the rival into getting a shido. Each of the criteria in question was evaluated by the experts as: satisfactory (+) or unsatisfactory (-).

Results

Video footage analysis showed that the athletes in the control group earned 254 shido in their competition bouts, which on average accounts for 2.1 shido per bout. None of the contestants managed to escape shido. In the last 2 minutes of the bouts, the contestants got 208 shido, which on average accounts for 1.7 shido per bout. The total number of attempts at conducting different techniques, as the experts think, amounted to 1191 times. The judo athletes made 1087 technical moves from a standing position (Nage-waza). There were 134 successful takes among these, which on average account for 1.1 techniques per bout. In the last 2 minutes of the bouts, the contestants made 462 attempts at conducting techniques from a standing position, 38 of which were considered successful, i.e. 0.3 attempts per bout on average.

As for ground fighting (Ne-waza), the experts recognised 104 attempts at conducting techniques, of which only 16 were considered successful, which on average accounts for 0.1 attempts per bout. In the last 2 minutes of the bouts, the contestants made 73 attempts, of which only 9 were considered successful technical moves, on average that is 0.075 attempts per bout. In regard to the dynamics of fighting: speed of performing clinches; athletes' movements on the mat; intervals between attempts at conducting a move, - the experts say the athletes show an acceptable level. The interval between the athletes' real attempts at conducting this or that technical move has been defined to be about 35 seconds.

All in all, the analysis of the tactics that the athletes use in competitive fighting showed that the majority of the contestants apply their tactical patterns to gain an advantage (performance of a technical move or pushing their rival into getting a shido) which they try to sustain until the end of the bout.

The main results of the expert analysis are shown in Table 1.

Table 1. Results of the expert analysis of competition battles.

Investigated criteria	Number of moves and experts evaluations				
	total	successful	average per bout	average successful	experts evaluation
Committed faults (shido)	254	-	2.1	-	+
Shido (in the last 2 minutes)	208	-	1.7	-	+
Moves in the standing position (Nage-waza)	1087	134 (12%)	9.0	1.1 (11%)	+
Nage-waza (in the last 2 minutes)	462	38 (8%)	3.8	0.3 (8%)	-
Ground fighting (Ne-waza)	104	16 (15%)	0.8	0.1 (12%)	-
Ne-waza (in the last 2 minutes)	73	9 (12%)	0.6	0.075 (13%)	-
Fighting dynamics (intervals between technical moves)	-	-	35 seconds	-	+

Discussion

In the course of analysis experts noted that, unfortunately, none of the judo contestants managed to escape committing faults - they all got one or a few shido during their competition battles. However, given the contemporary conditions of aggressiveness and attack-driven combat, the athletes could hardly avoid getting at least one shido during the bout, which on average amounted to 2.1 (one shido per athlete), so the experts considered the results satisfactory (+). Specialists also find it quite normal to see a considerable number of shido earned by the athletes in the last 2 minutes of the bout. It can be explained by their overall exhaustion and tactical schemes such as when the winning judo contestant opts for holding their lead (maintains a defensive posture, blocks their rival's attacks, avoids active attacks), they would rather get a shido from the referees than get beaten in the technical score.

The number of technical and tactical moves made by the athletes from a standing position (Nage-waza) was also considered by the experts to be satisfactory (+). It was revealed that on average the judo contestants apply 9 techniques per bout (at least 4 techniques each). These actions are real attempts to perform a throw (false attacks, falling into ground fighting and pushes were not taken into account), that is why they were evaluated positively by the experts.

Nevertheless, the experts discovered a substantial negative downward trend of both total number of attempts at techniques and number of successful technical and tactical moves in stand-up fighting conducted by the judoka during the second half of the bout (in the last 2 minutes). This factor has an extremely negative impact, because, as it is known from the experts, the strongest Japanese combatants are capable of performing real attacks by attempts to conduct a technique even in the last few seconds of the bout (Shevchenko, & Smirnov, 2009). That is why these criteria were not considered satisfactory (-).

Analysis of the ground fighting (Ne-waza) demonstrated that the combat techniques the athletes used were inefficient. In 120 bouts there were only 104 real attempts at performing a submission lock, a chokehold, or a turnover with a hold, of which only 16 proved successful. According to the experts, it means that, firstly, the athletes have not been technically trained to perform active combat in stand-up fighting (Ne-waza), and, secondly, that the athletes are prone to use some tactical schemes that are not aimed at gaining advantage over their rival, but rather at dragging out the bout. It is substantiated by the fact that most of the techniques were performed by the athletes in the last minutes of the bout, however, their effectiveness was minimal. The average number of real technical moves in Ne-waza per bout accounted for only 0.8 attempts per bout, which is less than 1. The average number of successful technical moves in Ne-waza is yet lower than that, only 0.1 per bout. As long as these criteria were not satisfied, the experts evaluated the performance as unsatisfactory (-).

The general dynamics of conducting competitive fighting was considered satisfactory (+). The experts did not register any significant intervals of passive fighting in Nage-waza. On average, it took this or that judo contestant 35 seconds to make an attempt at conducting a technique. Most of the time was used by the athletes to find their grip, meanwhile, changing position very quickly, trying to lead the rival after themselves, create favourable conditions for a throw, and make a good impression on the judges being on the move. However, the specialists drew attention to the evident decline in activity of those leading the bout that they show in the last minutes, it can be explained partly by their accumulated exhaustion, but also by their reluctance to continue attacking moves.

As for the athletes' level of tactical mastery, the experts concluded that most of the judo contestants in the control group tend to use tactical patterns that win them some advantage in the competitive fighting (getting technical points, rival's shido) at the beginning of the bout and keep a hold on it. It is substantiated by the total number of techniques performed by the athletes in Nage-waza (625 attempts at conducting techniques in the first 3 minutes of the bout and 462 attempts in the last 2 minutes), as well as the analysis of the ground fighting (Ne-waza) (41 attempts at techniques in the first 3 minutes and 73 attempts in the last 2 minutes), and the great number of shido they got in the last minutes of the bout. Nevertheless, despite the fact that the tactical patterns did help many of the athletes win the bouts, the experts regarded them as inappropriate for competitive fighting at high-level competitions. Given the high competitiveness and biased refereeing, athletes must conduct active (up-tempo) and attacking (aggressive) fighting within the whole competitive bout, raising the pressure (making real attempts at techniques both in Nage-waza and Ne-waza) from the first and up to the last minute of the bout. The same opinion is expressed by overseas experts. According to I. Segedi, success in contemporary judo can only be achieved if the athlete attacks rather than holds to defensive or waiting tactics (Segedi, Sertic, Franjic, Kustro, & Rozac, 2014). In this regard, the level of tactical mastery of the athletes in the control group was considered unsatisfactory (-) and insufficient for achieving high competitive results on the global stage.

Conclusions

The author's research showed that the overall level of technical and tactical skills of the vast majority of young judo athletes (18 to 20 years of age), representing the Krasnoyarsk territory and the Siberian Federal District, is not high enough to conduct competitive fighting according to the competition rules and thus to win medals at high level competitions. Some criteria, such as: active fighting in Ne-waza, active fighting in the last minutes of the bout both in Nage-waza and Ne-waza, fighting tactics, - were not met by the athletes and, as a

result, did not bring them any positive feedback from the experts, especially concerning the level of competitive activity. Coaches and athletes must give attention to the results of the study in order to improve the level of their competitive skills.

At the same time, the experts estimated positively the overall dynamics of competitive combat performed by the athletes in question, putting an emphasis on the significant number of real attempts at techniques they made. All in all, in their opinion, the level of the most athletes' technical mastery proves to be high enough to enable them to conduct active attack-driven fighting at high-class competitions. It is anyway necessary to adopt the tactical approaches to competitive fighting that would allow the judo athletes to improve their activity in the last minutes of the bout.

References.

- Adam, M., Klimovicz, P., & Pujszo, R. (2016). Judoists' tactical and technical efficiency during the World Championships in 2014 and 2015. *Baltic Journal of Health and Physical Activity*, 8(2), 19-28.
http://www.academia.edu/26807659/Judoists_tactical_and_technical_efficiency_during_the_World_Championships_in_2014_and_2015
- Adashevskiy, V.M., Dulewski, M., & Iermakov, S.S. (2011). Biomechanical aspects of the technical and tactical actions in the judo. *Pedagogika, psikhologiya i mediko-biologicheskie problemy fizicheskogo vospitaniya i sporta*. 3. 3-7. Available from: <http://elibrary.ru/download/70432717.pdf>
- Blais, L. & Trilles, F. (2006). The progress achieved by judokas after strength training with a judo-specific machine. *Journal of sports science & medicine*. 5. 132-135.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3863927/>
- Bliznevsky, A.A., Kudryavtsev, M.D., Iermakov, S.S., & Jagiełło, W. (2016). Formation of active-effective attitude of 12-13 year judo athletes to sports functioning in competition period. *Archives of Budo*, 12, 101-115.
- Bobrovskiy, V.A., & Krest'yaninov, V.A. (2011). Realization of tactical training in judo sportsmen of high qualification on tournaments activity. *Omsk scientific bulletin*. 5(101). 176-180. Available from: <http://elibrary.ru/item.asp?id=17275175>
- Bocioaca, L. (2014). Technical and tactical optimization factors in judo. *Procedia – Social and Behavioral Sciences*. 117. 389-394.
- Dakhnovsky, V.S. & Eganov, A.V. (1986). Improvement of technical-tactical readiness of judo wrestlers. Wrestling: Yearbook. Moscow. 72-74. Available from: <http://sportlib.su/Annals/Wrestling/1986/p72-74.htm>
- Daniel, L.F., & Daniel, R. (2013). Study regarding the prediction of medal winning in Olympic Games judo competitions. *Journal of Physical Education and Sport*. 13(3). 386-390.
<http://efsupit.ro/images/stories/62.pdf>
- Dopico, X., Iglesias-Soler, E., & Carballeira, E. (2014). Classification of judo motor skills: tactical and motor criteria approach. *Archives of Budo. Science of martial arts and extreme sports*. 10. 75-83.
https://www.researchgate.net/publication/271442285_Classification_of_judo_motor_skills_tactical_and_motor_criteria_approach
- Eganov, A.V. (1999). Upravlenie trenirovochnym protsessom povysheniya sportivnogo masterstva dzyudoistov [Century the control over the training process of increase of sports skill of judo-wrestlers]. Chelyabinsk, 364 p. Available from: <http://www.lib.ua-ru.net/diss/cont/107919.html>
- Iermakov, S., Podrigalo, L., Romanenko, V., Tropin, Y., Boychenko, N., Rovnaya, O., & Kamaev, O. (2016). Psycho-physiological features of sportsmen in impact and throwing martial arts. *Journal of Physical Education and Sport*, 16(2), 433-441.
<http://efsupit.ro/images/stories/nr1.2016/art%2067,%20pp%20433%20-%20441.pdf>
- Exclusive interview with Alexander Mikhaylin September 13, 2013. Available from: <http://mmaboxing.ru/exclusive/eksklyuzivnoe-intervyu-aleksandra-mihaylina-1.html>
- Kazakhstan judo wrestlers criticized the new rules. Available from: <http://vesti.kz/judo/170817/>
- Kruszewsky, A., Jagiełło, W., & Adamiec, T. (2008). The evaluation of tactical and technical preparation of the senior medalists from 66 kg category participating in European Championships from 2004 to 2006. *Pedagogika, psikhologiya i mediko-biologicheskie problemy fizicheskogo vospitaniya i sporta*. 9. 83-87. Available from: <http://elibrary.ru/download/76254098.pdf>
- Lech, G., Chwala, W., Ambrozy, T., & Sterkowicz, S. (2015). Muscle torque and its relation to technique, tactics, sports level and age group in judo contestants. *Journal of Human Kinetics*. 45. 167-175.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4415829/>
- Manolachi, V. (2015). Experimental argumentation of development of force and force-velocity abilities of judo players in the context of coaching process. *Journal of Physical Education and Sport*. 15(3). 582-584.
<http://efsupit.ro/images/stories/nr3.2015/60.%20articol%20Manolachi%20Pitesti%202.pdf>
- Miarka, B., Del Vecchio, F., Julianetti, R., Cury, R., Camey, S., & Franchini, E. (2016). Time-motion and tactical analysis of Olympic judo fighters. *International Journal of Performance Analysis in Sport*.

- I(16). 133-142. <http://www.ingentaconnect.com/content/uwic/ujpa/2016/00000016/00000001/art00012>
- Mihailescu, L.N., Rata, G., & Sava, M.A. (2011). Possibilities for determining the role of attention in the achievement in judo performance. *Journal of Physical Education and Sport*. 11(4). 449-454. <http://efsupit.ro/images/stories/imgs/JPES/2011/12/13Art69.pdf>
- Osipov, A.Yu. (2016). The analysis of Siberian federal district judo-wrestlers training in modern competitive wrestling. *Bulletin of Krasnoyarsk State Pedagogical University named after V.P. Astafiev*, 1(35). 105-108. Available from: <http://elibrary.ru/download/89484383.pdf>
- Osipov, A.Yu., Saparov, B.M., & Shubin, D.A. (2016). The readiness of judo wrestlers of the Ural and Siberia to competitive wrestling. *Problemy sovremennogo pedagogicheskogo obrazovaniya*. 50(3). 110-117. Available from: <http://elibrary.ru/item.asp?id=25296113>
- Osipov, A.Yu. (2015). The estimation of judo-wrestlers' tactics preparation for competitions. *Bulletin of Krasnoyarsk State Pedagogical University named after V.P. Astafiev*, 3(33). 98-100. Available from: <http://elibrary.ru/download/66352670.pdf>
- Osipov, A.Yu. (2014). Analysis of the Krasnoyarsk territory's judo wrestlers' preparedness for competitive wrestling according to new rules of competitions. *Bulletin of Krasnoyarsk State Pedagogical University named after V.P. Astafiev*, 1(27). 88-91. Available from: <http://elibrary.ru/download/57875344.pdf>
- Osipov, A.Yu., Pazenko, V.I., Shubin, D.A., Vapaeva, A.V., & Fedorova, J.V. (2014). New rules of judo as a factor of decrease in competitiveness of the Russian wrestlers on the international scene. *In the World of Scientific Discoveries*, 1.1. 481-492. Available from: <http://elibrary.ru/item.asp?id=22288893>
- Pankov, V.A. (2003). Analysis of results of performances of national teams of Russia on judo, freestyle and Greco-Roman wrestling. *Theory and Practice of Physical Culture*. 10. 50-52. Available from: <http://bmsi.ru/doc/4a147b2d-cd14-43f6-b9bb-c7ab40ad715a>
- Parkhomovich, G.P. (1993). *Osnovy klassicheskogo dzyudo* [Fundamentals of classical judo]. Perm', 302 p. Available from: http://anapasport.ru/lib/dzudo/G.P._PARHOMOVICH_OSNOVY_KLASSICHESKOGO_DZJUUDO.pdf
- Pashuta, V.L., & Vavilkin, D.S. (2013). Technique of preparation of the qualified judoists with usage of technical and tactical complexes of attacking actions. *Uchenye zapiski universiteta imeni P.F. Lesgafta*. 1(95). 107-111. Available from: <http://elibrary.ru/download/62701089.pdf>
- Santos, L., Fernandez-Rio, H., Almansba, R., Stercowicz, S., & Callan, M. (2015). Perceptions of top-level judo coaches on training and performance. *International Journal of Sports Science & Coaching*. 10(1). 145-158. <http://spo.sagepub.com/content/10/1/145.full.pdf+html>
- Segedi, I., Sertic, H., Franjic, D., Kustro, N., & Rozac, D. (2014). Analysis of judo match for seniors. *Journal of Combat Sports and Martial Arts*. 2(5). 57-61. <http://combatsports.edu.pl/abstracted.php?level=5&ICID=1141976>
- Shalyakho, Yu., M. (2007). Unification of Attacking Technical-Tactical Actions in Judo. *Theory and Practice of Physical Culture*. 8. 45-50. Available from: <http://bmsi.ru/doc/f1836657-3ebd-4de7-8a73-ed2eee833093>
- Shevchenko, D.V., & Smirnov, Yu.A. (2009). The dynamics of indicators of competitive activities of elite judo athletes. *Uchenye zapiski universiteta imeni P.F. Lesgafta*. 9(55). 108-111. Available from: <http://elibrary.ru/download/11872842.pdf>
- Tamura, N., Hirose, N., Nakamura, M., Saitoh, H., Yamauchi, N., Tanaka, C., Suzuki, K., & Suganami, M. (2012). Changes in judo kumite tactics according to revisions of the IJF competition rules. *Research Journal of Budo*. 45(2). 143-149. https://www.jstage.jst.go.jp/article/budo/45/2/45_143/article
- Tel'uk, S.I. (2014). Comparative analysis of competitive activity of Russian men judo team on 2012 Olympic games and 2013 World championships. *Vestnik sportivnoy nauki*. 3. 13-17. Available from: <http://elibrary.ru/item.asp?id=22574914>
- Trutnev, P.V. (2006). Eksperimental'noe obosnovanie povysheniya rabotosposobnosti dzyudoistov vysokoy kvalifikatsii [Experimental substantiation of increase of efficiency of highly qualified judoists]. Krasnoyarsk, 24 p. Available from: <http://www.dslib.net/fiz-vospitanie/jeksperimentalnoe-obosnovanie-povysheniya-rabotosposobnosti-dzjudoistov-vysokoj.html>
- Zubitashvili, G., & Mayashvili, K. (2012). Characteristics of attention of young judokas at different age. *Journal of Physical Education and Sport*. 12(1). 125-128. http://efsupit.ro/images/stories/nr%201%202012/vol%2012_1_%20art%2020.pdf